

REMARKS

Claims 1, 3, 5, 6, 8, 10, 11, 13, and 15 are pending in this application. Claims 16, 17, and 18 have been canceled. Claims 1, 6, and 11 have been amended to incorporate the features of canceled claims 16, 17, and 18 respectively.

Claims 1, 3, 5, 6, 8, 10, 11, 13, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,519,240 to Dillinger et al. (hereinafter "Dillinger") in view of U.S. Patent No. 5,933,421 to Alamouti et al. (hereinafter "Alamouti") and further in view of U.S. Patent No. 5,648,955 to Jensen et al. (hereinafter "Jensen").

Dillinger relates to a method for channel allocation in a TD/CDMA system. Time slots that are available for assignment are divided into three portions: (1) a first portion allocated to a first base station, (2) a second portion allocated to a second base station, and (3) a third portion that can be dynamically allocated (column 2, lines 5-7 and 27-36). When assigning time slots, the method first looks to the time slot portion allocated to the base station with which a mobile station is communicating. If no time slots are available in the allocated portion, then the base station looks to the third portion of time slots to see if a dynamically-assignable time slot is available (column 5, line 54 to column 6, line 21). Dillinger provides a chronological sequence of time slots. However, Dillinger does not teach arranging

time slots based on decreasing order of quality, nor does Dillinger disclose ordering physical channels based on decreasing desired reception quality. Independent claims 1, 6, and 11 of the present invention all teach arranging the time slots in decreasing order of quality, and ordering the physical channels based on a decreasing desired reception quality of each of the new user service physical channels.

Alamouti discloses a channel allocation algorithm that determines a channel candidacy assessment factor based on a direction of arrival of a signal from a remote station, a received signal strength indicator as measured at the remote station, and a signal to interference ratio as measured at the remote station (column 22, lines 43-63 and column 23, lines 10-26). Like Dillinger, Alamouti does not teach arranging the time slots based on decreasing order of quality, nor does Alamouti disclose ordering physical channels based on decreasing desired reception quality.

Similarly, Jensen also does not teach arranging the time slots based on decreasing order of quality, nor does Jensen disclose ordering physical channels based on decreasing desired reception quality. Jensen was cited by the Examiner as determining time slot quality as a figure of merit. Jensen teaches evaluating the quality of available channels for both the originating base station and other nearby

base stations using a figure of merit. This is not the same as measuring quality of different timeslots for communication with the same base station.

Further, the figure of merit in Jensen is based on different factors than the figure of merit in the present invention. Jensen's figure of merit is based on (1) received signal quality and (2) channel utilization (see Jensen column 16, lines 6-18). The present invention's figure of merit is determined by calculating a difference between a measured interference level of the time slot and a minimum measured interference for all time slots, and an allowed number of physical channels for the provided physical channels in the time slot (see claims 1, 6, and 11, and specification paragraph 0035, Equation 4).

Both of these factors are different than the factors used in Jensen. The "difference between a measured interference level of the time slot and a minimum measured interference for all time slots" is clearly not the same as "received signal quality" because it is possible to have no change in difference in interference levels and still have a poor received-signal quality. Similarly, "the allowed number of physical channels for the provided physical channels in the time slot" is not the same as "time slot utilization", because the number of allowed channels may depend on several factors other than channel utilization, such as interference (see specification paragraph 0027). Therefore, Jensen does not teach that the quality of

a time slot is determined by a figure of merit as it is defined in independent claims 1, 6, and 11.

None of the cited references teach or suggest the features of either: (1) arranging the time slots based on decreasing order of quality and ordering physical channels based on decreasing desired reception quality, or (2) measuring time slot quality as a figure of merit as defined in claims 1, 6, and 11. Accordingly, combining the cited references does not result in the present invention, and withdrawal of the §103 obviousness type rejection is respectfully requested.


Applicants submit that the amendments and remarks made herein place pending claims 1, 3, 5, 6, 8, 10, 11, 13, and 15 in condition for allowance. Accordingly, reconsideration and allowance of the pending claims are respectfully requested.

Applicant: Zeira et al.
Application No.: 09/854,728

If the Examiner does not believe that the claims are in condition for allowance, the Examiner is respectfully requested to contact the undersigned at 215-568-6400.

Respectfully submitted,

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